

4. The rotary tableting press according to claim 1 wherein the central opening in each of said lower punch casings includes a bore extending to a terminal end, and wherein each of said lower punch casings

- includes a die portion extending from the terminal end of said bore to an end of  
5 said casing, and an opening defining a material chamber extending through said  
die portion and communicating with said bore, and wherein each of said lower  
punch members includes a central body portion slidably received in said bore  
and a mold shaft extending from one end of said body portion, at least a portion  
10 of said mold shaft being slidably received in the material chamber of said die  
portion.

5. The rotary tableting press according to claim 1 wherein  
the openings in said upper and lower carousels are arranged in at least two  
concentric rows of openings in an outer peripheral portion of said upper and  
lower carousels.

6. The rotary tableting press according to claim 3 wherein  
each of said upper punch members includes a mold projection extending from  
one side of a central body portion, and wherein the mold projection includes an  
upper mold recess and wherein the mold shaft of the lower punch member  
5 includes a lower mold recess, the upper and lower mold recesses positioned  
such that they are brought into intimate confronting relationship during said  
reciprocation of said punch members, the reciprocation of the punches causing  
material between the mold recesses to compress to form a tablet.

7. The rotary tableting press according to claim 6 wherein  
the upper and lower mold recesses are substantially similar in size and shape.

8. The rotary tableting press according to claim 2 wherein  
each upper roller includes an arcuate surface which projects below a lower  
surface of the upper plate, and wherein each lower roller includes an arcuate  
surface which projects above an upper surface of the lower plate

9. The rotary tableting press according to claim 2 wherein each of the upper and lower rollers is fixed against rotation and wherein the center of each of said upper rollers is in substantial alignment with the center of one said lower rollers.

10. The rotary tableting press according to claim 6 wherein the body portion of each upper punch extends above an upper surface of the upper punch casing, the body portion having an upper end with a retention flange, wherein the means for biasing includes a first resilient member located between the retention flange and the upper surface of the upper punch casing and biases the upper end of the upper punch member away from the upper punch casing, and a second resilient member located between the central body portion of the lower punch member and the lower punch casing for biasing the central body portion of the lower punch member away from the lower punch casing.

11. The rotary tableting press according to claim 10 wherein each of said second resilient members is a spring located within the central opening of one of said lower punch casings.

12. The rotary tableting press according to claim 6 wherein the confronting relationship between the mold recesses in said upper and lower punch members occurs adjacent to an upper surface of said lower carousel.

13. The rotary tableting press according to claim 10 further including a fixed lower plate mounted below the lower carousel, the lower plate having at least one ejection cam formed on an upper surface, the ejection cam projecting upwardly from the upper surface of the lower plate and adapted to contact a follower formed on and extending downward from the central body portion of the lower punch member, the contact between the ejection cam and

the follower forcing the mold shaft of the lower punch member to eject the tablet from the lower punch casing.

14. The rotary tableting press according to claim 13 further comprising at least one tablet weighting station for metering a preselected amount of material to be molded in the material chamber of said lower punch casings, said tablet weighting station including a doser supported by said tablet  
5 weighting station such that an upper surface of said doser is located adjacent the lower plate of said tableting press for contact with said follower of said lower punch members, said tablet weighting station including an adjustable support for adjustment of the position of the upper surface of said doser with respect to the lower plate.

15. The rotary tableting press according to claim 8 wherein the support of at least one of said upper and lower rollers by said tableting press is adjustable such that the distance which the arcuate surface projects from the plate may be varied.

16. The rotary tableting press according to claim 3 wherein the upper end of the upper punch member is rounded and adapted to slide along the lower surface of the upper plate, and wherein the lower end of the follower is rounded and adapted to slide along the upper surface of the lower plate.

17. A rotary tableting press comprising:  
a turret having upper and lower portions rotatably supported by  
said tableting press each having a plurality of openings such that each of the  
openings in said upper portion is aligned with one of the openings in said lower  
5 portion;  
a plurality of upper and lower punch assemblies each comprising  
a punch casing removably received in one of the openings in said upper and  
lower turret portions and having a central opening defining a punch contact

- surface, each upper and lower punch assembly further comprising a punch  
10 received in the central opening of said punch casing for sliding contact between  
said punch and the punch contact surface of said punch casing; and  
means for reciprocating said upper and lower punches within said  
upper and lower punch casings.

18. The rotary tableting press according to claim 17 wherein  
said reciprocating means comprises upper and lower rollers supported by said  
tableting press, said upper and lower rollers positioned and oriented to engage a  
first end of said upper and lower punches to direct said upper and lower punches  
5 towards one another, and wherein said reciprocating means further comprises  
means for biasing said upper and lower punches, said means for biasing  
upwardly biasing said upper punch members into contact with an upper plate  
and downwardly biasing said lower punch members into contact with a lower  
plate.

19. A system for supporting punches in a rotary tableting  
press, said system comprising:

- a turret comprising upper and lower portions rotatably supported  
by said tableting press, each portion having a plurality of openings such that  
5 each of the openings in said upper portion is aligned with one of the openings in  
said lower portion;

- a plurality of upper and lower punch casings removably received  
in one of the openings in said upper turret portion and having a central opening  
defining a punch contact surface, each upper and lower punch casing receiving a  
10 punch for sliding contact between said punch and the punch contact surface of  
said punch casing; and

- means for reciprocating said punches within said upper and lower  
punch casings.

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20. The system according to claim 19 wherein the central opening in each of said lower punch casings includes a bore having a terminal end and wherein each of said punch casings includes a die portion extending from the terminal end of said bore to an end of said casing, said die portion
- 5 having an opening defining a material chamber extending through said die portion and communicating with said bore.

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